

# **GFE Job Sheet 7: Editing Grids in the Spatial editor - Smart Tools**

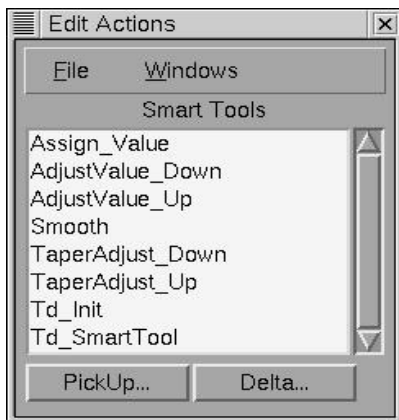
## **Objective**

This job sheet will familiarize the user with the concept of smart tools and their use in the editing process.

## **Procedures**

### **A. Edit Actions based upon Edit Areas.**

1. While in Edit Mode for the Temperature weather element, *create an edit area using the Draw Edit Area Tool.*
2. Select the *Edit Action Dialog* button from the button bar.
3. The Edit Actions window will then open. Now *select one of the Smart Tools* listed. Here is a brief description of the 4 main Smart Tools:



Assign\_Value tool will assign the current Pickup Value across an edit area.

AdjustValue\_Up tool will add the Delta Value to the grid values in an edit area.

AdjustValue\_Down tool will subtract the Delta Value from the grid value in an edit area.

Smooth tool will smooth out strong gradients.

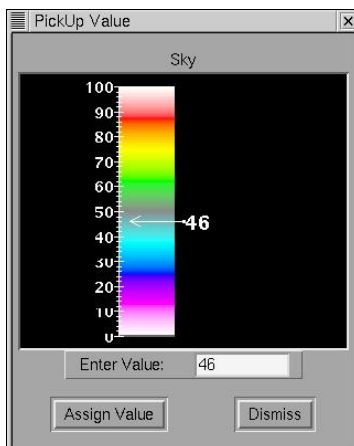
4. Select the *AdjustValue\_Down* and *AdjustValue\_Up* tools and notice the effect on your edit area.

**NOTE: Smart tools can be applied to a specific edit area or an entire grid if no edit area is defined.**

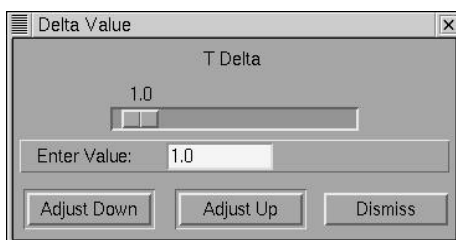
### **B. Editing a Scalar Field**

Use a temperature grid for the following exercise.

1. Define a new edit area using the *Draw Edit Area Tool*.
2. Select the *Sample Tool* from the button bar and *create one sample point* within your edit area. This will allow you to observe the changes that are made when you execute the smart tools.
3. Select the *Edit Actions Dialog* from the button bar. A pop-up window will appear.
4. The Pickup value is what will be assigned to the edit area when you use the Assign Value smart tool. Assign a Pickup Value by clicking on the *Pickup* button, selecting a temperature, and clicking on *Assign\_Value*.



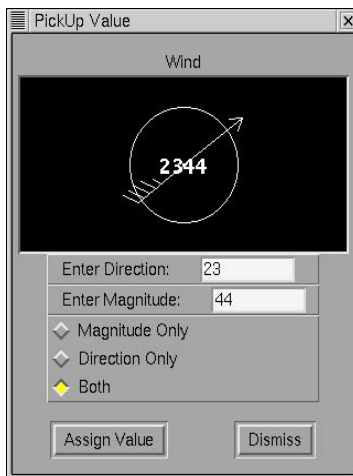
5. Assign a Delta Value by clicking on the *Delta* button and adjusting the slider button in the pop-up window. The Delta value is the numeric change that will occur when you use the *Adjust\_up* and *Adjust\_down* smart tools.



6. Use each of the four basic smart tools (Assign\_value, Adjust\_up, Adjust\_down, and Smooth), by clicking on them in the Edit Actions Dialog window. Note the effect.

### **C. Editing Winds**

1. Call up a wind grid in edit mode and define an edit area with the Draw Edit Area tool.
2. Open up a Pickup Value window by the method described previously. The following windows will appear:

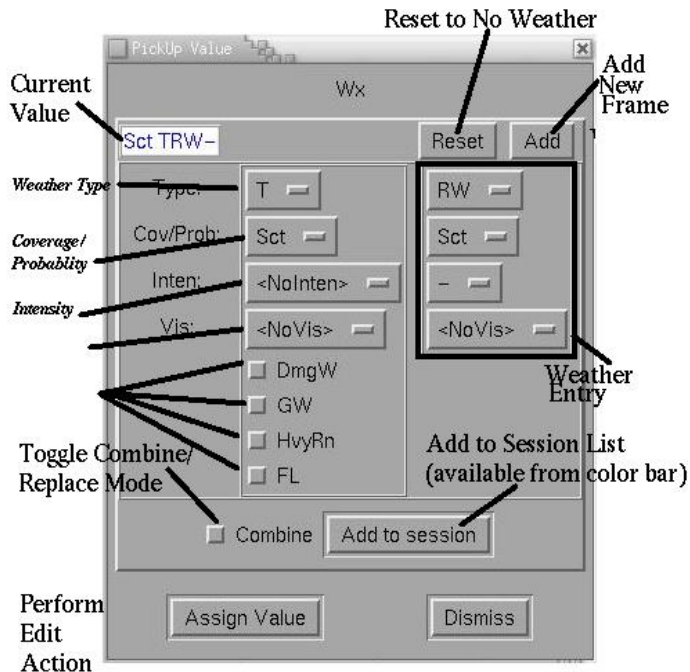


3. Select wind speed and direction by pressing and dragging the left mouse button on the wind vector to the desired level. You will see a readout of both the wind speed and direction. You can also select wind speed and directly by typing in the speed and direction in the Enter Magnitude and Enter Direction command line (Hit the Enter key for the value to be accepted!)
5. Once the desired wind speed and direction has been selected as the current Pickup Value, then select the *Assign Value* button. The wind field in the edit area will now be changed to the current Pickup Value.
6. Using the procedures identified in the first part of this exercise, *execute the four basic smart tools* to modify the wind grid.

### **D. Editing Weather**

1. Call up a Wx grid in edit mode and define an edit area with the Draw Edit Area Tool.
2. Right click on the color bar and look at the options under Set to Common Values. Pick a weather type of your choice. The edit area should change.

3. Now we will add a weather type that is not in the common values list by selecting the *Edit Action Dialog* button from the button bar and clicking on *Pickup*. The Pickup Values window should open (see the figure below). The previous weather element that you chose should be displayed. The next steps will show you how to add a weather type.



4. Click on the *Reset* button in the Pickup Value window. You will now be identifying a new weather type from scratch. Make the following selections in the Pickup Value window:

Type = T (Thunderstorm)  
 Cov/Prob = Iso  
 Inten: +  
 Vis: ½ SM  
 Select the buttons for DmgW and HvyRn

5. Assign the new weather type to the edit area by clicking on the *Assign Value* button from the Pickup Value window.

6. Click on the *Add to Session* button to add the weather type you just created to the list of available weather types for this session. *Right click on the color bar*, and you should see two new choices, Set to Recent Values and Set to Session Values. Your new weather type should appear under both.

**NOTE: The weather parameter you just created under the Pickup Value window is referred to as the Ugly String. These strings can be manipulated in different ways and can be used within smart tools.**